



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
ADVISORY COMMITTEE ON NUCLEAR WASTE  
WASHINGTON, D.C. 20555-0001

ACNWS-0105

PDR

June 8, 1999

The Honorable Shirley Ann Jackson  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

SUBJECT: SUMMARY REPORT—109TH MEETING OF THE ADVISORY COMMITTEE ON  
NUCLEAR WASTE, MAY 11–13, 1999, AND OTHER RELATED COMMITTEE  
ACTIVITIES

Dear Chairman Jackson:

During its 109<sup>th</sup> meeting on May 11–13, 1999, at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, the Advisory Committee on Nuclear Waste (ACNW or the Committee) discussed several matters and approved the following report:

“Linear No Threshold Hypothesis” (Report to Shirley Ann Jackson, Chairman, NRC, from B. John Garrick, Chairman, ACNW, June 4, 1999)

**HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE**

**1. Yucca Mountain Review Plan**

During this portion of the meeting, the staff updated the Committee on its plans to develop a review plan for the Department of Energy's (DOE's) license application for the proposed high-level waste (HLW) repository at Yucca Mountain, Nevada.

Keith McConnell, Office of Nuclear Material Safety and Safeguards (NMSS), introduced the principal presenter, Christiana H. Lui. After discussing the staff's four underlying principles, Ms. Lui discussed the currently envisioned draft outline of the Yucca Mountain Review Plan (YMRP). She noted that although DOE's 19 principal factors are not addressed individually, NRC's approach does encompass the related activities. She stated that the staff believes that its approach will possibly eliminate over-prescriptive acceptance criteria. Beginning in Fiscal Year 2000, all acceptance criteria and review methods will be developed under the YMRP, but the status of issue resolution will continue to be documented in the Issue Resolution Status Reports.

The possible impact of the as-yet unpublished Environmental Protection Agency (EPA) draft standard for Yucca Mountain, 40 CFR Part 197, on the NRC's draft published regulation, 10 CFR Part 63, and potential interactive impacts on the intended YMRP schedule were noted. However, at this time, any such evaluation would be premature.

### **Conclusions/Action Items**

The Committee indicated that it desired to follow the development of the YMRP closely and looked forward to periodic updates as the various scheduled completion dates were met. The Committee also looks forward to the development of the preclosure sections of the YMRP, which, at this time, have not been formulated to the same level as post-closure considerations.

## **2. Risk Communication**

The ACNW heard briefings on risk communication and public outreach initiatives under way within the NRC, the EPA, and the Nuclear Energy Institute (NEI). The purpose of the briefings was for the ACNW to become familiar with ongoing public outreach activities within the NRC, other Federal agencies, and industry as part of its exploration of its first-tier priority topic on risk communication.

Representatives from the Office of Nuclear Reactor Regulation described their new risk-informed, performance-based oversight inspection process and how the process is being communicated within the NRC and to stakeholders. The staff is conducting a series of public meetings to inform and involve the public and has established a change coalition to facilitate internal communications.

The Deputy Director for Regulatory Effectiveness summarized ongoing communications activities throughout the NRC, including those of the Communications Activities Group and implementation of the Public Communications Initiative (Direction-Setting Issue 14) and the Plain Language Action Plan.

A representative from the Office of Nuclear Regulatory Research described interim results of a cooperative agreement on risk communication to the public and to decision-makers. Project results will be used to provide the basis for the development of risk communication guidelines for the NRC staff.

An NEI representative shared her insights and experiences in communicating with the public on nuclear issues. She explained that well-meaning technical people make the mistake of responding to the public in terms of facts and figures but do not address the real concerns of the people. NEI recommended that NRC recognize the wide range of public audiences it must reach, require risk communication training, and solicit routine feedback to measure the effectiveness of its outreach efforts.

The EPA representative discussed lessons learned in stakeholder involvement from EPA's Project XL, "excellence and leadership." Under the XL program, EPA offers flexibility to industry in exchange for superior environmental performance and stakeholder involvement.

### **Conclusions/Actions**

Additional briefings will be scheduled in June, July, August, and September 1999 in preparation for the Committee's meeting with the stakeholders planned for October 1999 in the Yucca Mountain area.

### **(3) Meeting With NRC's Executive Director for Operations**

The Committee met with the Executive Director for Operations (EDO), William D. Travers, and the Director of NMSS, Carl J. Paperiello. The discussions centered on future areas in which ACNW advice would be helpful to the NRC staff. Among the areas identified were milestones in the licensing of Yucca Mountain (the Environmental Impact Statement, the new EPA Yucca Mountain site-specific standard, and NRC's HLW regulation). Other topics discussed were risk communication and the transportation of HLW.

### **Conclusions/Action Items**

The Committee and the EDO agreed to schedule such exchanges on a regular basis.

## **PROPOSED SCHEDULE FOR THE 110<sup>th</sup> ACNW MEETING**

The Committee agreed to consider the following issues at its 110th meeting on June 28–30, 1999:

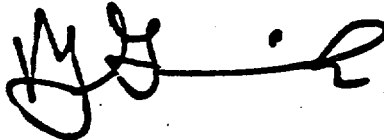
- **ACNW Planning and Procedures** — The ACNW staff will brief its Committee on issues to be covered during this meeting. The Committee will consider topics proposed for future consideration by the full Committee and working groups. The Committee will discuss ACNW-related activities of individual members.
- **Review Activities Under Way at the Center for Nuclear Waste Regulatory Analyses** — The Committee will review activities under way at the Center for Nuclear Waste Regulatory Analyses (CNWRA or the Center). Discussions will include an overview of the Center, including its historical evolution. Each of the 10 HLW key technical issues (KTIs) will be reviewed and special emphasis will be placed on 4 KTIs: Igneous Activity, Evolution of the Near-Field, Repository Design and Thermal Mechanical Effects, and Container Life and Source Term.

- **Laboratory Tours** —The Committee will view a number of experiments being conducted at the Center involving hydrology and thermal-hydrology, geochemistry and radionuclide transport, structural geology modeling, and materials.
- **Yucca Mountain Environmental Impact Statement** —The Committee will review the staff's plans for reviewing the DOE's Draft Environmental Impact Statement for the Yucca Mountain project.
- **Total-System Performance Assessment Code 3.2 Sensitivity Study** —The Committee will review the results of the system-level sensitivity and uncertainty analyses to determine which parameters have the most influence on repository performance.
- **Defense In Depth** —The NRC staff and the CNWRA will discuss the current concept of defense in depth as it applies to an HLW repository.
- **Environmental Protection Agency Yucca Mountain Site-Specific Standard (tentative)** — The Committee may offer comments to the NRC on EPA's Yucca Mountain site-specific standard, 40 CFR Part 191, if the proposed standard is made publicly available. The timing for release of the standard remains uncertain.
- **Preparation of ACNW Reports** —The Committee will discuss planned reports, including reports on a white paper on "Engineered Barriers at Yucca Mountain," and other topics discussed during this and previous meetings.

**OTHER RELATED ACTIVITIES OF THE COMMITTEE**

The 111th ACNW meeting has been scheduled for July 19–21, 1999.

Sincerely,

A handwritten signature in black ink, appearing to read "B. John Garrick". The signature is stylized and cursive, with a long horizontal stroke extending to the right.

B. John Garrick  
Chairman